Fig. 1

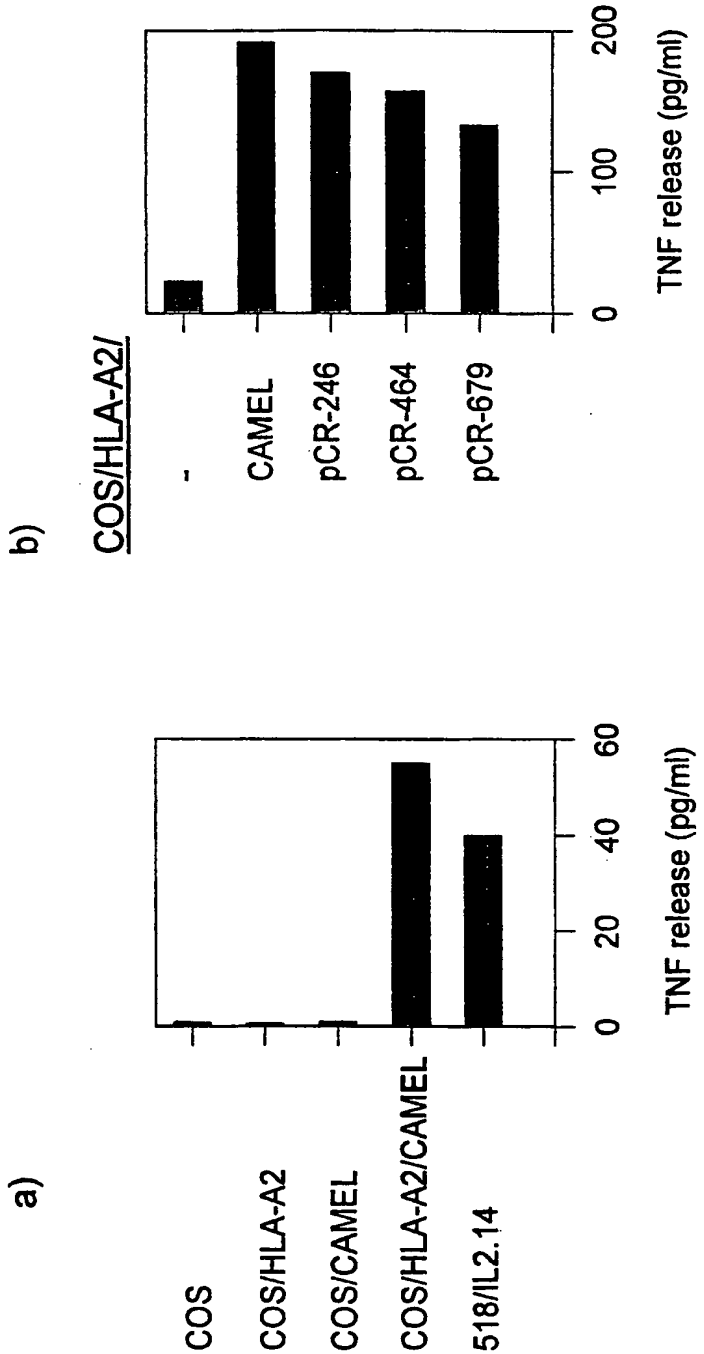

a)
COS
COS/HLA-A2
COS/CAMEL
COS/HLA-A2/CAMEL
518/IL2.14
0
20
40
60
TNF release (pg/ml)
b)
COS/HLA-A2/
-
CAMEL
pCR-246
pCR-464
pCR-679
0
100
200
TNF release (pg/ml)

Fig. 2A

FIGURE 2 A)

```
CAMEL       --------------------------------------------------
LAGE-1^S    --ATCCTCGTGGGCCCTGACCTTCTCTCTGAGAGCCGGGCAGAGGCTCCG   48
LAGE-1^L    GCATCCTCGTGGGCCCTGACCTTCTCTCTGAGAGCCGGGCAGAGGCTCCG   50
NY-ESO-1    --ATCCTCGTGGGCCCTGACCTTCTCTCTGAGAGCCGGGCAGAGGCTCCG   48

CAMEL       ------------------------------------CGACGGGCGATGCT   14
LAGE-1^S    GAGCCATGCAGGCCGAAGGCCAGGGCACAGGGGGTTCGACGGGCGATGCT   98
LAGE-1^L    GAGCCATGCAGGCCGAAGGCCAGGGCACAGGGGGTTCGACGGGCGATGCT  100
NY-ESO-1    GAGCCATGCAGGCCGAAGGCCGGGGCACAGGGGGTTCGACGGGCGATGCT   98
                                               **************

CAMEL       GATGGCCCAGGAGGCCCTGGCATTCCTGATGGCCCAGGGGGCAATGCTGG   64
LAGE-1^S    GATGGCCCAGGAGGCCCTGGCATTCCTGATGGCCCAGGGGGCAATGCTGG  148
LAGE-1^L    GATGGCCCAGGAGGCCCTGGCATTCCTGATGGCCCAGGGGGCAATGCTGG  150
NY-ESO-1    GATGGCCCAGGAGGCCCTGGCATTCCTGATGGCCCAGGGGGCAATGCTGG  148
            **************************************************

CAMEL       CGGCCCAGGAGAGGCGGGTGCCACGGGCGGCAGAGGTCCCCGGGGCGCAG  114
LAGE-1^S    CGGCCCAGGAGAGGCGGGTGCCACGGGCGGCAGAGGTCCCCGGGGCGCAG  198
LAGE-1^L    CGGCCCAGGAGAGGCGGGTGCCACGGGCGGCAGAGGTCCCCGGGGCGCAG  200
LAGE-1^L    CGGCCCAGGAGAGGCGGGTGCCACGGGCGGCAGAGGTCCCCGGGGCGCAG  198
            **************************************************
```

Fig. 2A continued

```
CAMEL      GGGCAGCAAGGGCCTCGGGCCGAGAGGAGGCGCCCCGCGGGGTCCGCAT   164
LAGE-1^S   GGGCAGCAAGGGCCTCGGGCCGAGAGGAGGCGCCCCGCGGGGTCCGCAT   248
LAGE-1^L   GGGCAGCAAGGGCCTCGGGCCGAGAGGAGGCGCCCCGCGGGGTCCGCAT   250
NY-ESO-1   GGGCAGCAAGGGCCTCGGGCCGGGAGGAGGCGCCCCGCGGGGTCCGCAT   248
           **********************.*************************

CAMEL      GGCGGTGCCGCTTCTGCGCAGGATGGAAGGTGCCCCTGCGGGGCCAGGAG  214
LAGE-1^S   GGCGGTGCCGCTTCTGCGCAGGATGGAAGGTGCCCCTGCGGGGCCAGGAG  298
LAGE-1^L   GGCGGTGCCGCTTCTGCGCAGGATGGAAGGTGCCCCTGCGGGGCCAGGAG  300
NY-ESO-1   GGCGGCGCGGCTTCAGGCTGAATGGATGCTGCAGATGCGGGGCCAGGGG   298
           ***** ** *****.* **.*.*****.* ***    ************.*

CAMEL      GCCGGACAGCCGCCTGCTTCAGTTGCACATCACGATGCCTTTCTCGTCGC  264
LAGE-1^S   GCCGGACAGCCGCCTGCTTCAGTTGCACATCACGATGCCTTTCTCGTCGC  348
LAGE-1^L   GCCGGACAGCCGCCTGCTTCAGTTGCACATCACGATGCCTTTCTCGTCGC  350
NY-ESO-1   GCCGGAGAGCCGCCTGCTTGAGTTCTACCTCGCCATGCCTTTCGCGACAC  348
           ****** *********** ****   ** **.* *********.**.*.*

CAMEL      CCATGGAAGCGGAGCTGGTCCGCAGGATCCTGTCCCGGGATGCCGCACCT  314
LAGE-1^S   CCATGGAAGCGGAGCTGGTCCGCAGGATCCTGTCCCGGGATGCCGCACCT  398
LAGE-1^L   CCATGGAAGCGGAGCTGGTCCGCAGGATCCTGTCCCGGGATGCCGCACCT  400
NY-ESO-1   CCATGGAAGCAGAGCTGGCCCGCAGGAGCCTGGCCCAGGATGCCCCACCG  398
           **********.******* ********.****.***.******* ****.
```

09/807512

Fig. 2A continued

CAMEL	CTCCCCCGACCAGGGGCGGTTCTGAAGGACTTCACCGTGTCCGGCAACCT	364
$LAGE-1^{S}$	CTCCCCCGACCAGGGGCGGTTCTGAAGGACTTCACCGTGTCCGGCAACCT	448
$LAGE-1^{L}$	CTCCCCCGACCAGGGGCGGTTCTGAAGGACTTCACCGTGTCCGGCAACCT	450
NY-ESO-1	CTTCCCGTGCCAGGGGTGCTTCTGAAGGAGTTCACTGTGTCCGGCAACAT	448
	** *** ..******* * ********** ***** ************ *	
CAMEL	ACTGTTTAT---	373
$LAGE-1^{S}$	ACTGTTTAT---	457
$LAGE-1^{L}$	ACTGTTTATGTCAGTTCGGGACCAGGACAGGGAAGGCGCTGGGCGGATGA	500
NY-ESO-1	ACTGACTAT---	457
	****. ***	
CAMEL	--	373
$LAGE-1^{S}$	--	457
$LAGE-1^{L}$	GGGTGGTGGGTTGGGGGCTGGGATCCGCCTCCCCGGAGGGGCAGAAAGCT	550
NY-ESO-1	--	457
CAMEL	--	373
$LAGE-1^{S}$	--	457
$LAGE-1^{L}$	AGAGATCTCAGAACACCCAAACACAAGGTCTCAGAACAGAGACCTGGTAC	600
NY-ESO-1	--	457

Fig. 2A continued

```
CAMEL      --------------------------------------------------  373
LAGE-1S    --------------------------------------------------  457
LAGE-1L    ACCAGGCCCGCCGCCACCCGAGGGAGCCCAGGGAGATGGGTGCAGAGGTG  650
NY-ESO-1   --------------------------------------------------  457

CAMEL      --------------------------------------CCGACTGACTGC  385
LAGE-1S    --------------------------------------CCGACTGACTGC  469
LAGE-1L    TCGCCTTTAATGTGATGTTCTCTGCCCCTCACATTTAGCCGACTGACTGC  700
NY-ESO-1   --------------------------------------CCGACTGACTGC  469
                                                 ************

CAMEL      TGCAGACCACCGCCAACTGCAGCTCTCCATCAGCTCCTGTCTCCAGCAGC  435
LAGE-1S    TGCAGACCACCGCCAACTGCAGCTCTCCATCAGCTCCTGTCTCCAGCAGC  519
LAGE-1L    TGCAGACCACCGCCAACTGCAGCTCTCCATCAGCTCCTGTCTCCAGCAGC  750
NY-ESO-1   TGCAGACCACCGCCAACTGCAGCTCTCCATCAGCTCCTGTCTCCAGCAGC  519
           **************************************************

CAMEL      TTTCCCTGTTGATGTGGATCACGCAGTGCTTTCTGCCCGTGTTTTTGGCT  485
LAGE-1S    TTTCCCTGTTGATGTGGATCACGCAGTGCTTTCTGCCCGTGTTTTTGGCT  569
LAGE-1L    TTTCCCTGTTGATGTGGATCACGCAGTGCTTTCTGCCCGTGTTTTTGGCT  800
NY-ESO-1   TTTCCCTGTTGATGTGGATCACGCAGTGCTTTCTGCCCGTGTTTTTGGCT  569
           **************************************************
```

Fig. 2A continued

CAMEL CAGGCTCCCTCAGGGCAGAGGCGCTAAGCCCAGCCTGGCGCCCCTTCCTA 535
LAGE-1^S CAGGCTCCCTCAGGGCAGAGGCGCTAAGCCCAGCCTGGCGCCCCTTCCTA 619
LAGE-1^L CAGGCTCCCTCAGGGCAGAGGCGCTAAGCCCAGCCTGGCGCCCCTTCCTA..850
NY-ESO-1 CAGCCTCCCTCAGGGCAGAGGCGCTAAGCCCAGCCTGGCGCCCCTTCCTA..519
*** ***

CAMEL GGTCATGCCTCCTCCCCTAGGGAATGGTCCCAGCACGAGTGGCCAGTTCA 585
LAGE-1^S GGTCATGCCTCCTCCCCTAGGGAATGGTCCCAGCACGAGTGGCCAGTTCA 669
LAGE-1^L GGTCATGCCTCCTCCCCTAGGGAATGGTCCCAGCACGAGTGGCCAGTTCA 900
NY-ESO-1 GGTCATGCCTCCTCCCCTAGGGAATGGTCCCAGCACGAGTGGCCAGTTCA 669
****

CAMEL TTGTGGGGGCCTGATTGTTTGTCGCTGGAGGAGGACGGCTTACATGTTTG..635
LAGE-1^S TTGTGGGGGCCTGATTGTTTGTCGCTGGAGGAGGACGGCTTACATGTTTG..719
LAGE-1^L TTGTGGGGGCCTGATTGTTTGTCGCTGGAGGAGGACGGCTTACATGTTTG..950
NY-ESO-1 TTGTGGGGGCCTGATTGTTTGTCGCTGGAGGAGGACGGCTTACATGTTTG..719
****

CAMEL TTTCTGTAGAAAATAAAGCTGAGCTACGAAAAAAAAAAAAAAAA----- 679
LAGE-1^S TTTCTGTAGAAAATAAAGCTGAGCTACGAAAAAAAAAAAAAAAAAAAAA 767
LAGE-1^L TTTCTGTAGAAAATAAAGCTGAGCTACGAAAAAAAAAAAAAAA------ 993
NY-ESO-1 TTTCTGTAGAAAATAAAACTGAGCTACGAAAAA---------------- 752
*****************.***************

Fig. 2B

Protein Translations

ORF3

LAGE-1^S	MQAEGQGTGGSTGDADGPGGPGIPDGPGGNAGGPGEAGAT	40
LAGE-1^L	MQAEGQGTGGSTGDADGPGGPGIPDGPGGNAGGPGEAGAT	40
NY-ESO-1	MQAEG**R**GTGGSTGDADGPGGPGIPDGPGGNAGGPGEAGAT	40
LAGE-1^S	GGRGPRGAGAARASGPRGGAPRGPHGGAASAQDGRCPCGA	80
LAGE-1^L	GGRGPRGAGAARASGPRGGAPRGPHGGAASAQDGRCPCGA	80
NY-ESO-1	GGRGPRGAGAARASGPGGGAPRGPHGGAAS**GLN**G**C**C**R**CGA	80
LAGE-1^S	RRPDSRLLQLHITMPFSSPMEAELVRRILSRDAAPLPRPG	120
LAGE-1^L	RRPDSRLLQLHITMPFSSPMEAELVRRILSRDAAPLPRPG	120
NY-ESO-1	R**GPE**SRLL**EFYLA**MPF**AT**PMEAEL**A**RR**S**L**AQ**DA**P**PLP**V**PG	120
LAGE-1^S	AVLKDFTVSGNLLFIRLTAADHRQLQLSISSCLQQLSLLM	160
LAGE-1^L	AVLKDFTVSGNLLF**MSVRDQDREGAGRMRVVGWGLGSASP**	160
NY-ESO-1	**VL**LK**E**FTVSGN**ILT**IRLTAADHRQLQLSISSCLQQLSLLM	160

Fig. 2B continued

LAGE-1^S	WITQCFLPVFLAQAPSGQRR	180
LAGE-1^L	**EGQKARDLRTPKHKVSEQRPGTPGPPPPEGAQGDGCRGVA**	200
NY-ESO-1	WITQCFLPVFLAQ**P**PSGQRR	180
LAGE-1^S		180 aa, 18.2 kD
LAGE-1^L	**FNVMFSAPHI**	210 aa, 21.1 kD
NY-ESO-1		180 aa, 18.2 kD

ORF1

LAGE-1^S	MLMAQEALAFLMAQGAMLAAQERRVPRAAEVPGAQGQQGP	40
LAGE-1^L	MLMAQEALAFLMAQGAMLAAQERRVPRAAEVPGAQGQQGP	40
NY-ESO-1	MLMAQEALAFLMAQGAMLAAQERRVPRAAEVPGAQGQQGP	40
LAGE-1^S	RGREEAPRGVRMAVPLLRRMEGAPAGPGGRTAACFSCTSR	80
LAGE-1^L	RGREEAPRGVRMAVPLLRRMEGAPAGPGGRTAACFSCTSR	80
NY-ESO-1	RGREEAPRGVRMA**ARLQG**	58
LAGE-1^S	CLSRRPWKRSWSAGSCPGMPHLSPDQGRF	109 aa, 11.7 kD
LAGE-1^L	CLSRRPWKRSWSAGSCPGMPHLSPDQGRF	109 aa, 11.7 kD
NY-ESO-1		58 aa, 6.2 kD

Fig. 3

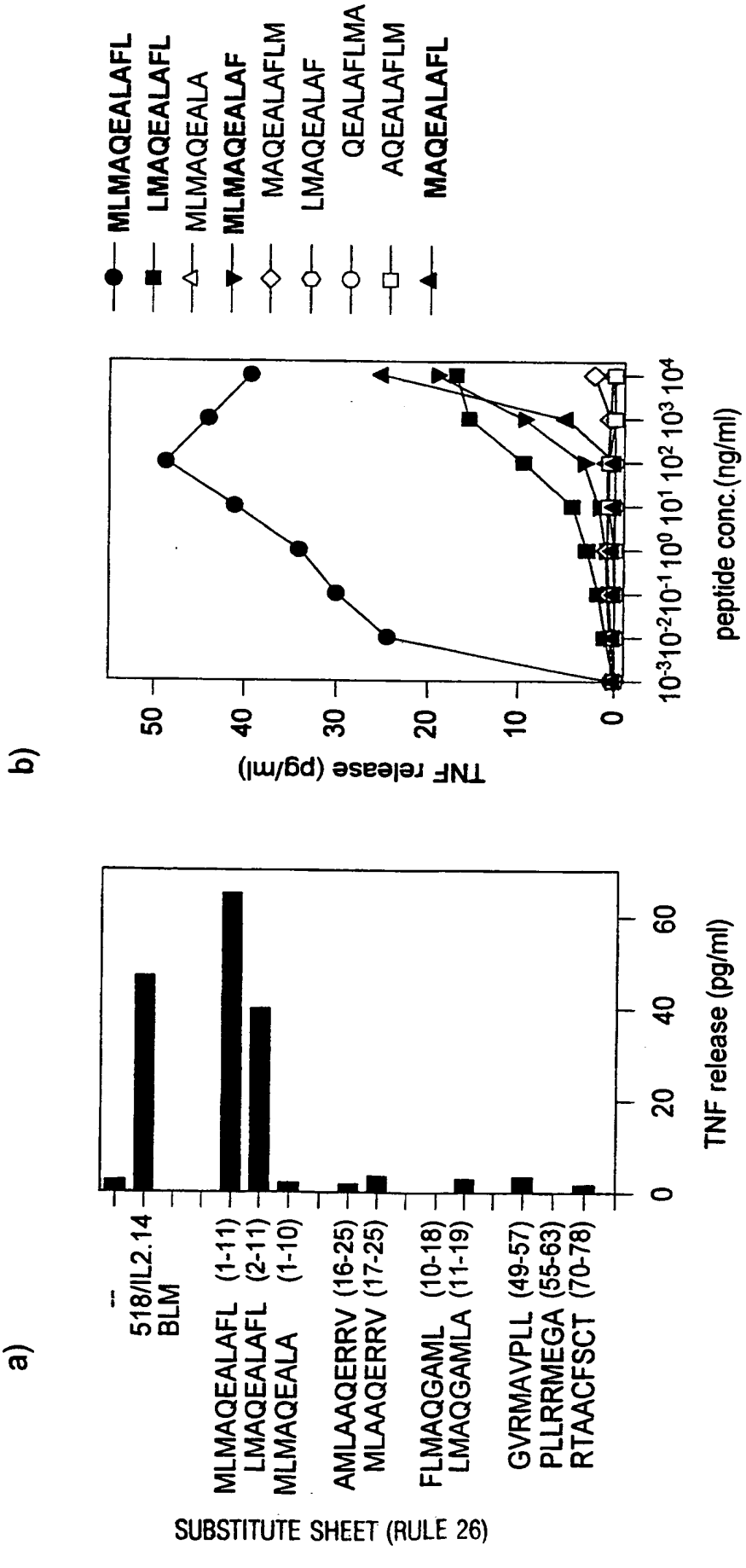

a)
--
518/IL2.14
BLM
MLMAQEALAFL (1-11)
LMAQEALAFL (2-11)
MLMAQEALA (1-10)
AMLAAQERRV (16-25)
MLAAQERRV (17-25)
FLMAQGAML (10-18)
LMAQGAMLA (11-19)
GVRMAVPLL (49-57)
PLLRRMEGA (55-63)
RTAACFSCT (70-78)
0 20 40 60
TNF release (pg/ml)
b)
MLMAQEALAFL
LMAQEALAFL
MLMAQEALA
MLMAQEALAF
MAQEALAFLM
LMAQEALAF
QEALAFLMA
AQEALAFLM
MAQEALAFL
TNF release (pg/ml)
0 10 20 30 40 50
10^{-3} 10^{-2} 10^{-1} 10^{0} 10^{1} 10^{2} 10^{3} 10^{4}
peptide conc.(ng/ml)

Fig. 4

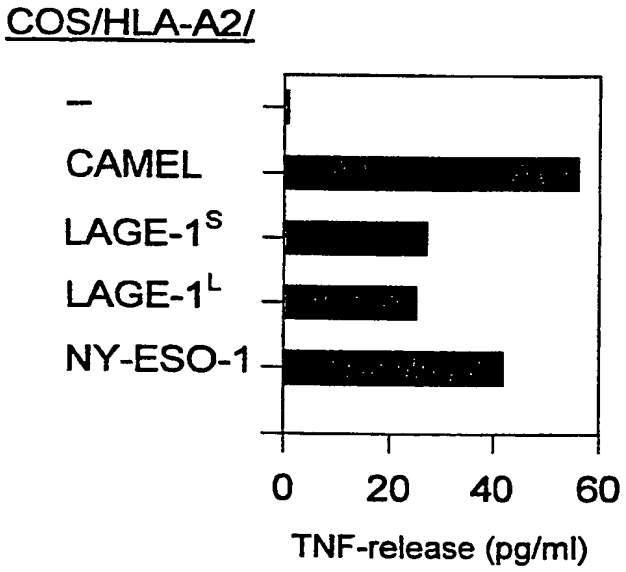

COS/HLA-A2/
–
CAMEL
LAGE-1S
LAGE-1L
NY-ESO-1
0
20
40
60
TNF-release (pg/ml)

Fig. 5

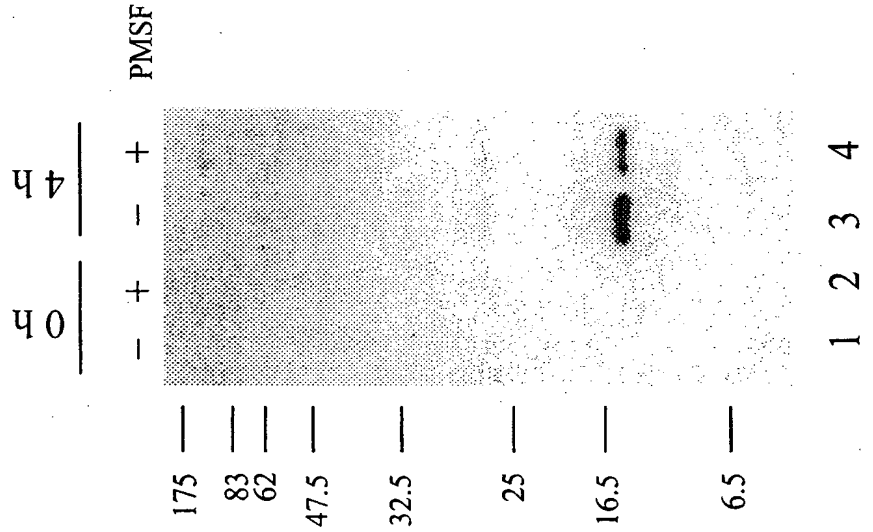
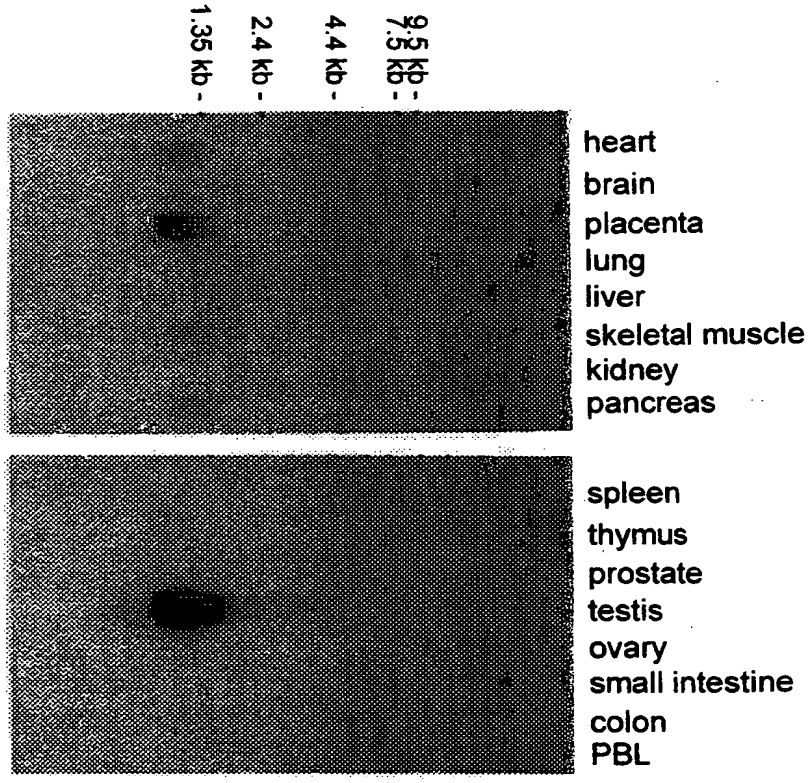


Fig. 6A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2.4 kb -
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9.5 kb -
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heart
brain
placenta
lung
liver
skeletal muscle
kidney
pancreas
spleen
thymus
prostate
testis
ovary
small intestine
colon
PBL

Fig. 6B

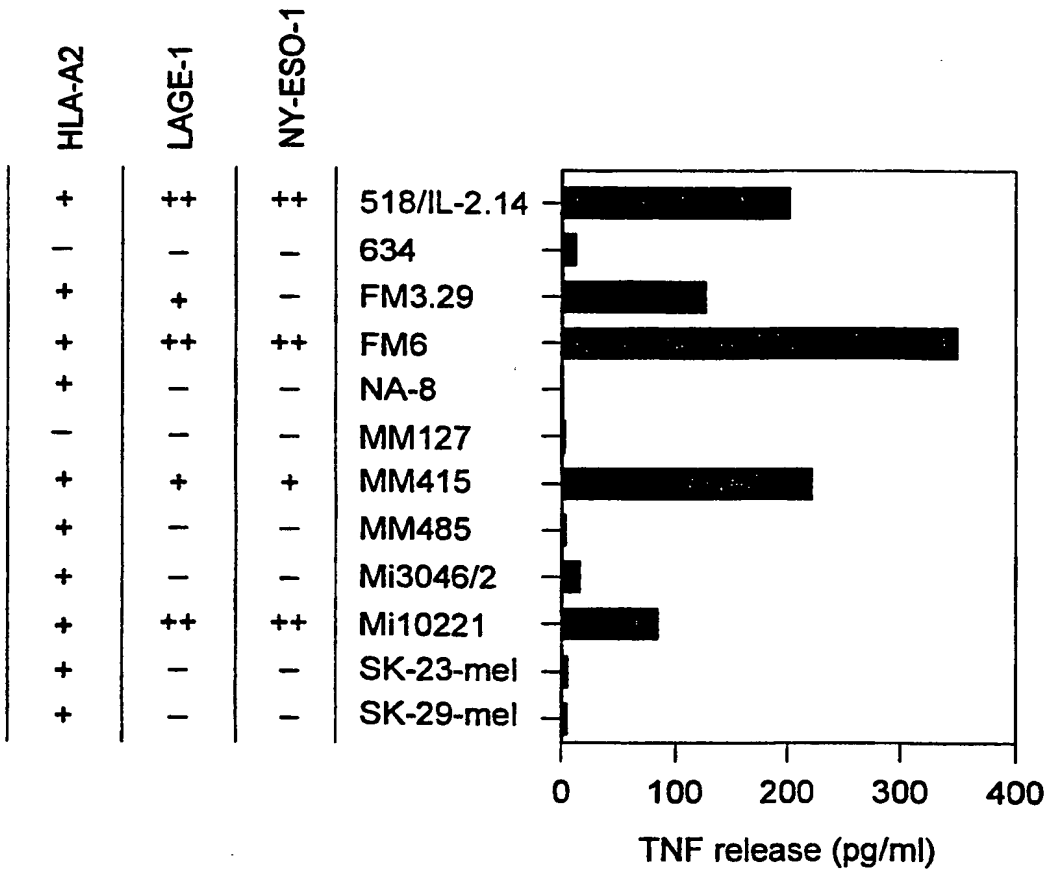

HLA-A2
LAGE-1
NY-ESO-1
+ ++ ++ 518/IL-2.14
− − − 634
+ + − FM3.29
+ ++ ++ FM6
+ − − NA-8
− − − MM127
+ + + MM415
+ − − MM485
+ − − Mi3046/2
+ ++ ++ Mi10221
+ − − SK-23-mel
+ − − SK-29-mel
0
100
200
300
400
TNF release (pg/ml)

Fig. 7

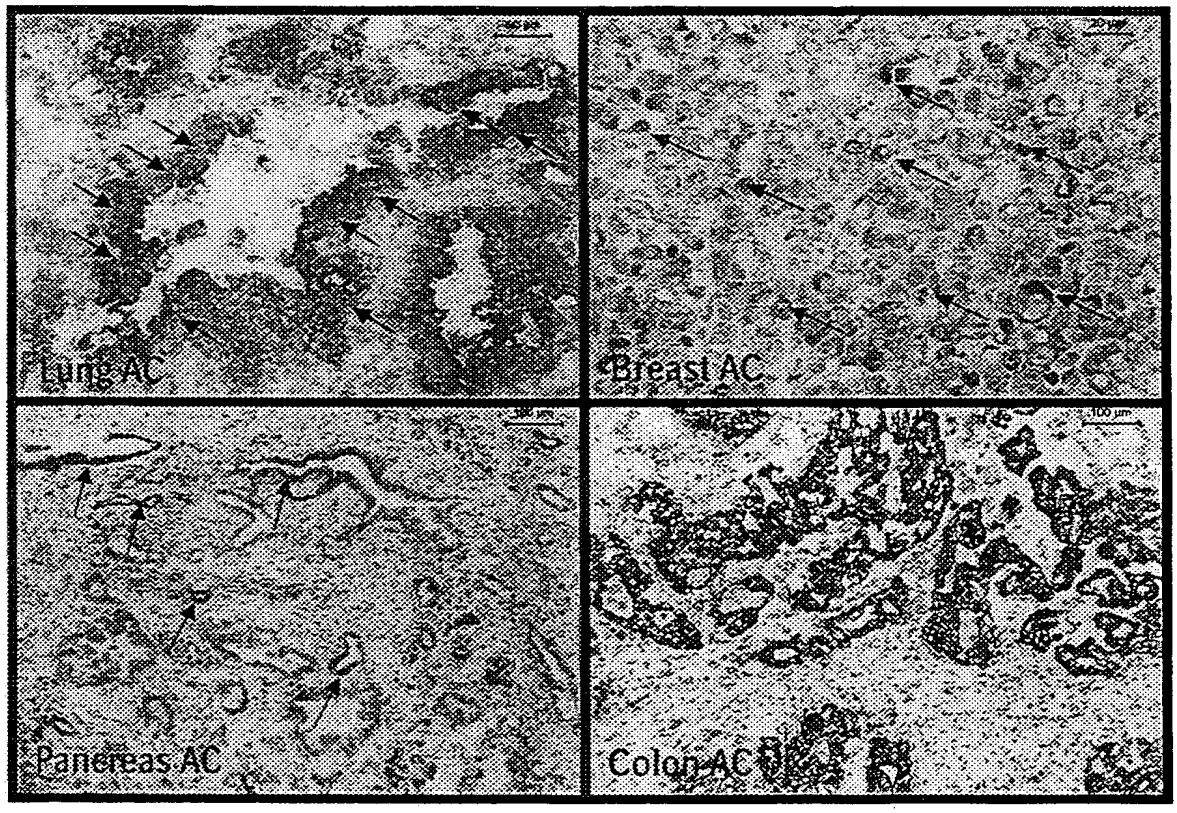
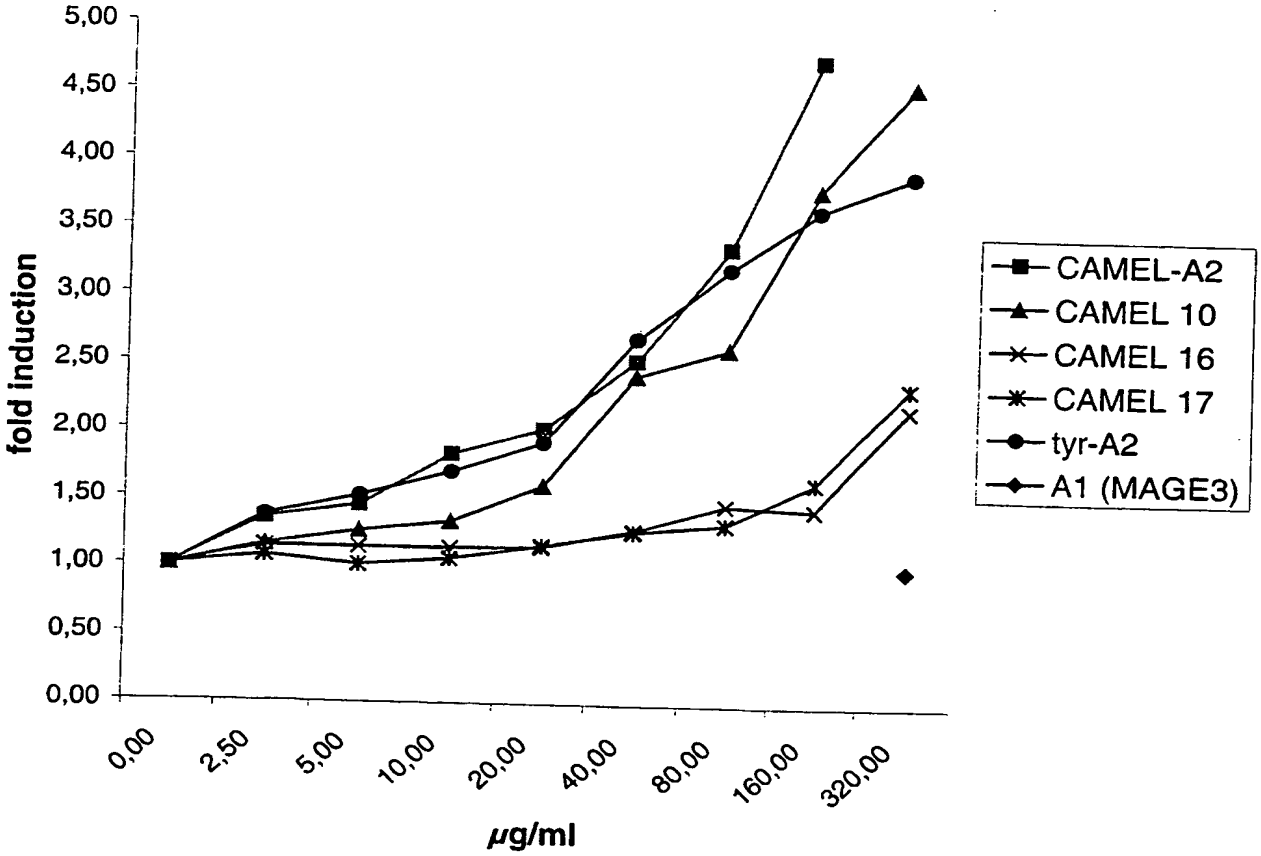


Fig. 8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1,00
0,50
0,00
fold induction
0,00
2,50
5,00
10,00
20,00
40,00
80,00
160,00
320,00
µg/ml
CAMEL-A2
CAMEL 10
CAMEL 16
CAMEL 17
tyr-A2
A1 (MAGE3)